

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

Paper No. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex Parte GIUSEPPE GUARINO  
and ERMANNO FILIPPI

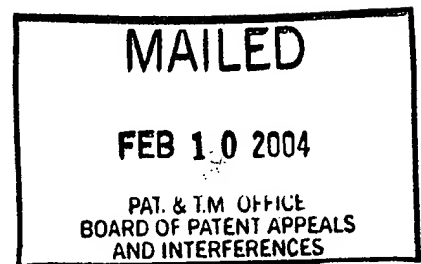
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Appeal No. 2003-1700  
Application 09/231,791

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HEARD: January 08, 2004

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Before WARREN, WALTZ and JEFFREY T. SMITH, Administrative Patent Judges.

JEFFREY T. SMITH, Administrative Patent Judge.

Decision on appeal under 35 U.S.C. § 134

Applicants appeal the decision of the Primary Examiner finally rejecting claims 1 to 10.<sup>1</sup> We have jurisdiction under 35 U.S.C. § 134.

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<sup>1</sup> Claims 1 and 6 on appeal were amended by an after final amendment, paper no. 16, filed September 20, 2002.

## BACKGROUND

The invention is directed to a heterogeneous synthesis reactor and a method for forming such a reactor. Claims 1 and 6 which are representative of the invention are reproduced below:

1. A method for in-situ modernization of a heterogeneous synthesis reactor, including an external shell comprising at least a catalytic bed (6) provided with a gas inlet perforated cylindrical wall (7) and a gas outlet perforated cylindrical wall (8), said method comprising the steps of:

providing an unperforated cylindrical wall (15) coaxial to said gas outlet wall (8) in said catalytic bed (6), said unperforated cylindrical wall (15) extending from an upper end (8a) of said gas outlet wall (8) along a perforated portion of said gas outlet wall and for a predetermined length in said catalytic bed, so as to define a free-space (16) between the perforated gas outlet wall (8) and the unperforated wall (15), for the passage of a part of the gas leaving said catalytic bed (6) through said portion of the gas outlet wall (8) facing said free-space (16);

providing means for closing an upper end of said free-space (16) between the unperforated wall (15) and the gas outlet wall (8), in proximity of the upper end (8a) of the wall (8), preventing thereby a bypass of said catalytic bed or a recycling to the catalytic bed of the gas entering and leaving the reactor, respectively.

6. A heterogeneous synthesis reactor comprising:

an external shell (2);

at least a radial or axial-radial catalytic bed (6), provided with a gas inlet perforated cylindrical wall (7) and a gas outlet perforated cylindrical wall (8), extended in said shell (2);

characterized in that it further comprises in said catalytic bed:

an unperforated cylindrical wall (15) coaxial to said gas outlet wall (8) in said catalytic bed (6), said unperforated cylindrical wall (15) extending from an upper end (8a) of said gas outlet wall (8) along a perforated portion of said gas outlet wall and for a predetermined length in said catalytic bed (6), so as to define a free space (16) between the perforated gas outlet wall (8) and the unperforated wall (15), for the passage of a part of the gas leaving said catalytic bed (6) through said portion of the gas outlet wall (8) facing said free-space (16);

means for closing said free-space (16) between the unperforated wall (15) and the gas outlet wall (8), in proximity of the upper end (8a) of the latter, preventing thereby a bypass of said catalytic bed or a recycling to the catalytic bed of the gas entering and leaving the reactor respectively.

#### ***CITED PRIOR ART***

As evidence of unpatentability, the Examiner relies on the following prior art:

Poussin	5,202,097	Apr. 13, 1993
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#### ***THE REJECTIONS***

The Examiner rejected claims 1, 4-6, 9 and 10 under 35 U.S.C.

§ 102(b) as unpatentable over Poussin; and claims 2, 3, 7 and 8 under 35 U.S.C.

§ 103(a) as unpatentable over Poussin. (Answer, pp. 3-6).

#### ***OPINION***

Upon careful review of the respective positions advanced by Appellants and the Examiner, we find that the Examiner has failed to carry the burden of

establishing a *prima facie* case of anticipation, *see Scripps Clinic & Research Found. v. Genentech Inc.*, 927 F.2d 1565, 1576, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991). Consequently, we will not affirm the rejection of the claims under § 102. However, under the provisions of 37 CFR § 1.196(b) we enter a new ground of rejection of claims 1-10 under § 103(a). Our reasons follow.

The rejection under § 102

In order for a claimed invention to be anticipated under 35 U.S.C. § 102, all of the elements of the claim must be found in one reference. *Scripps*, 927 F.2d at 1576, 18 USPQ2d at 1010.

Appellants argue that the unperforated cylindrical wall of Poussin, 10, “does not extend along a perforated portion of the gas outlet wall 9. The perforations appear to be shown schematically in the gas outlet wall 9 as only being located within the catalytic bed 31. The upper and lower ends of the gas outlet wall 9 are not provided with perforations since the upper and lower ends of the gas outlet tube are not surrounded or in contact with the catalytic bed. Thus, the cylindrical wall portion of the cap 10 clearly does not extend along a perforated portion of the gas outlet wall for a predetermined length in said catalytic bed” (Brief, pp. 6-7).

In response the Examiner states “the figures are schematic only and not pictorial, therefore the perforations illustrated in figure 1 do not demonstrate the

sole locations of perforations in the tube. This is also demonstrated by the additional perforations illustrated in figures 2 and 8.” (Answer, p. 6).

In essence the Examiner is arguing that the gas outlet wall 9 inherently contains perforations covered by the cap 10. However, *inherency* cannot be established by probabilities or possibilities. *See In re Oelrich*, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981). As stated in *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (quoting from *In re Oelrich*, 666 F.2d at 581, 212 USPQ at 326), “[t]he mere fact that a certain thing **may** result from a given set of circumstances is not sufficient [to establish inherency]” (emphasis in original). Under these circumstance, we cannot conclude that the examiner has met the minimum threshold of establishing inherency under 35 U.S.C. § 102.

#### New Rejections under § 103

Notwithstanding the Poussin reference failure to expressly disclose that the cap 10 covers perforations of the gas outlet tube 9, the reference is suitable for rejecting the claimed subject matter under 35 U.S.C. § 103(a). As stated above, the Examiner determined that the figures of Poussin are schematic and do not demonstrate the sole locations of perforations in the tube. The Examiner has also correctly determined that figures 2 and 8 exhibit additional perforations in the tube 9

that were not illustrated in figure 1. We note that Appellants have not disputed the Examiner's determinations by arguments in a supplemental brief.

Poussin discloses the gas tube 9 is generally perforated. (Col. 7, ll. 17-18). The cap 10, that covers the gas tube 9, functions to seal the gas tube 9 with respect to the charge. (Col. 7, ll. 19-22). Poussin also discloses that the cap 10 is immersed in the catalyst bed. (Col. 7, ll. 20-22). Based on the teachings of Poussin, a person of ordinary skill in the art would have reasonably expected that the cap 10 would cover perforations in the gas tube 9 that extend above the catalyst bed and any perforations that extended above the catalyst bed would have been sealed by the cap 10. One of ordinary skill in the art would have reasonably expected that the cap 10 would have sealed the gas tube 9 from the charge whether or not perforations extend above the catalyst bed. "For obviousness under § 103, all that is required is a reasonable expectation of success." *In re O'Farrell*, 853 F.2d 894, 904, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988).

Appellants argue that Poussin does not have the spacing between the cap 10 and gas tube 9 and the space appearing in figure 1 is "simply to show that two separate elements are provided." (Brief, p. 7). The disclosure in the Poussin reference does not support Appellants' arguments. Several figures exemplify that a space is present between the tube 9 and cap 10. (For example see figures 1 and 6).

Further, Poussin discloses that the gas tube 9 can be covered by a grid 30 that would provide a space between the cap 10 and the tube 9. (Col. 7, ll. 17-18; Fig. 2).

The Examiner rejected claims 2, 3, 7 and 8 under 35 U.S.C. § 103(a) as unpatentable over Poussin. (Answer, pp. 5-6). We affirm.

Appellants have not separately argued the patentability of claims 2, 3, 7 and 8. Appellants stated that “there is absolutely nothing within the disclosure of Poussin which would suggest modifications to one skilled in the art which would meet the limitations of claims 1 and 6 as well as dependent claims 2-5 and 7-10.” (Brief, p. 9). The Examiner has presented arguments regarding the patentability of claims 2, 3, 7 and 8. Since Appellant has failed to specifically challenge the Examiner’s rejection, we presume that they are in agreement with the Examiner. Thus, for the reasons presented above regarding the independent claims and the reasons presented by the Examiner we will uphold the rejection. Since we affirm this rejection based on our discussion of the § 103 rejection above, we deem this affirmance of claims 2, 3, 7 and 8 to be a new ground of rejection.

### ***CONCLUSION***

In summary, we reverse the Examiner’s rejection of claims 1, 4-6, 9 and 10 under 35 U.S.C. § 102(b) as unpatentable over Poussin. Under the provisions of 37 CFR § 1.196(b) we reject claims 1 to 10 under 35 U.S.C. § 103(a) as unpatentable

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over Poussin including our "affirmance" of the rejection of claims 2, 3, 7 and 8 which we have denominated as a new ground of rejection..

This decision contains a new ground of rejection pursuant to 37 CFR § 1.196(b) (1997). 37 CFR § 1.196(b) provides, "A new ground of rejection shall not be considered final for purposes of judicial review."

Regarding the new ground of rejection, 37 CFR § 1.196(b) provides that the Appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (37 CFR § 1.197(c)) as to the rejected claims:

- (1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .
- (2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .




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Time for taking action

No time period for taking any subsequent action in connection with this  
appeal may be extended under 37 CFR § 1.136(a).

***AFFIRMED-IN-PART; 37 CFR § 1.196(b)***

  
CHARLES F. WARREN  
*Administrative Patent Judge*

  
THOMAS A. WALTZ  
*Administrative Patent Judge*

  
JEFFREY T. SMITH  
*Administrative Patent Judge*

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